

# Work Order ID 60450

July 8, 2010 8:55:07 AM



Page 1

Item ID: D212-664-201

Accept



Setup Start



Revision ID:

Stop



Item Name: Crosstube Aft

Start Date: 7/08/10 Start Qty: 1.00



Cust Item ID:

Required Date: 7/12/10 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: CL Date: 10/7/18 Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

Draw Nbr

Revision Nbr

D212-664-241

Rev D

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile and create labels as per PPP D212-664-201 CHG003

*S. Soloshv*

*HJ FBG 10/07/29*

110

0.00



Pick Kit

Packaging

Memo

0.00

Packaging

Packaging

*(IX)*

*MB 10-07-20*

120

0.00



BENDING MACHINE - CROSSTUBES

Memo

0.00

CNC Bend 2

CNC Alpha 160 Bender

Bend tube as per Dwg D212-664-241 using CNC bender program 212-aft

*(IX)*

*MB 10-7-20*

| W/O: |      |  | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP |  | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |  |                    |    |      |     |                                     |                          |
|      |      |  |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

**Work Order ID 60450**

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Item ID: D212-664-201

Accept

Revision ID:

Item Name: Crosstube Aft

Start Date: 7/08/10 Start Qty: 1.00

Required Date: 7/12/10 Req'd Qty: 1.00

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Setup Start

Stop

Run Start

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool # Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

130

QC15- Crosstube Dimensional Check

0.00

8/10/10

QC

Memo

0.00

Quality Control

140

Crosstubes

0.00

Crosstubes

Memo

0.00

Crosstubes

1-Drill pilot holes in tube as per Dwg D212-664-241 using drill Jig DT8550, DT8551, drill table DT8577 and locate tower holes #8 as per QSI0010.

2-Ream hole to finish size in tube as per Dwg D212-664-241 using drill Jig DT8550 &amp; DT8551. Check dimensions between holes, both sides on both cuffs, to ensure alignment with saddle holes.

3-Scribe part # and batch # using vibrating stylus as per Dwg D212-664-241

4-Deburr &amp; Inspect for surface damage. Repair damage within limits as per Dwg D212-664-241

MP  
10-07-21

- AWM 10-07-21

| W/O: |      |  | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP |  | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |  |                    |    |      |     |                                     |                          |
|      |      |  |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |  |
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|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |  |
|      |      |                                  |                             |                                 |                |                           |                       |                          |  |
|      |      |                                  |                             |                                 |                |                           |                       |                          |  |
|      |      |                                  |                             |                                 |                |                           |                       |                          |  |

**NOTE:** Date & initial all entries

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**Accept**

Revision ID:

**Item Name:** Crosstube Aft

**Start Date:** 7/08/10      **Start Qty:** 1.00

**Required Date: 7/12/10      Req'd Qty: 1.00**

**Reference:**

**Approvals:**      **Process Plan:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Tooling:** \_\_\_\_\_ **Date:** \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

**Setup Start**

**Stop**

Run Start

**Stop**

**Sequence ID/  
Work Center ID**

## Operation Description

## Set Up/ Run Hours

## Tool ID

| Tool # | Plan Code |
|--------|-----------|
|--------|-----------|

Accept  
Qty

Reject  
Qty

| Reject<br>Number |
|------------------|
|------------------|

**Insp.  
Stamp**

150

### Crosstubes Chemical Conversion

0.00

HandFXtube

## Memo

0.00

### Hand Finishing Crosstubes

Chemical Conversion Coat as within 24 hours of bending and drilling

160

QC3- Inspect Part Finish

0.00

QC

## Memo

0.00

## Quality Control

170

QC5- Inspect part completeness to step on W/O

0.00

QC

## Memo

0.00

## Quality Control

| W/O: |      |  | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP |  | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |  |                    |    |      |     |                                     |                          |
|      |      |  |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |  |
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| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |  |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |  |
|      |      |                                  |                             |                                 |                |                           |                       |                          |  |
|      |      |                                  |                             |                                 |                |                           |                       |                          |  |
|      |      |                                  |                             |                                 |                |                           |                       |                          |  |

**NOTE:** Date & initial all entries

# Work Order ID 60450

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Item ID: D212-664-201

Accept

Setup Start

Revision ID:

Stop

Item Name: Crosstube Aft

Start Date: 7/08/10 Start Qty: 1.00

Cust Item ID:

Required Date: 7/12/10 Req'd Qty: 1.00

Customer:




Reference:

Run Start

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

| Sequence ID/<br>Work Center ID  | Operation<br>Description  | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|---|---|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 180<br><br>Outsource2 | Outsource process - NDT per QSI038 4.1  | 0.00                 |         |        |              |               |               |                  |                |
|   | <b>Memo</b><br>Liquid Penetrant Inspection as per QSI 038<br>Issue P/O: 12309<br>LPI as per ASTM 1417 Level 2<br>Attach copy of NDT results to work order | 0.00                 |         |        |              |               |               |                  |                |
| 190<br><br>Packaging | Receive & Inspect for Damage & Mat'l Certs<br>Packaging   | 0.00                 |         |        |              |               |               |                  |                |
|   | <b>Memo</b><br>Ensure copy of NDT results attached to work order.   | 0.00                 |         |        |              |               |               |                  |                |
| 200<br><br>QC       | QC5- Inspect part completeness to step on W/O   | 0.00                 |         |        |              |               |               |                  |                |
|   | <b>Memo</b><br>Inspect for damage & ensure results are as per Dwg D212-664-241  | 0.00                 |         |        |              |               |               |                  |                |

CZ 10/17/21 ①

P 1/7/22 ①

ml 10 07 26 ①

| W/O: |      |  | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP |  | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |  |                    |    |      |     |                                     |                          |
|      |      |  |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |  |
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|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |  |
|      |      |                                  |                             |                                 |                |                           |                       |                          |  |
|      |      |                                  |                             |                                 |                |                           |                       |                          |  |
|      |      |                                  |                             |                                 |                |                           |                       |                          |  |

**NOTE:** Date & initial all entries

# Work Order ID 60450

July 8, 2010 8:55:07 AM



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Item ID: D212-664-201

Accept



Setup Start



Revision ID:

Stop



Item Name: Crosstube Aft

Start Date: 7/08/10 Start Qty: 1.00



Cust Item ID:

Required Date: 7/12/10 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool # Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

210

Spray Painting per QSI005 4.2  
SprayPaint

0.00



SprayPaint

Memo

0.00

Spray Painting

1-Prime inside and outside crosstube as per QSI 005 4.2  
2-Paint outside crosstube with White Imron as per QSI 005 4.2

PRIME:

Start Time: 8:00

Finish Time: 9:00

PAINT:

Start Time: 1:00

Finish Time: 2:00

RT

10-07-28

220

QC14- Inspect Spray Paint

0.00



QC

Memo

0.00

Quality Control

Then, Wrap in plastic bag to protect from scratches

ml

10

07 070

| W/O: |      |  | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP |  | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |  |                    |    |      |     |                                     |                          |
|      |      |  |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

# Work Order ID 60450

July 8, 2010 8:55:07 AM



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Item ID: D212-664-201

Accept



Setup Start



Revision ID:

Item Name: Crosstube Aft

Stop



Start Date: 7/08/10 Start Qty: 1.00



Cust Item ID:

Required Date: 7/12/10 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool # Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

230

0.00



Crosstubes

Crosstubes

Memo

0.00

1- Lightly scuff the bonded area using a 320 grit sand paper and clean the area with 41058 wash 'n' wipe

2-Install supports with magnobond as per QSI 015. Adhere for for 12 Hrs

A/R 6398 Magnobond Batch: 114158

Expiry Date: 01/2011

3-Install clamps as per Dwg D212-664-241. Torque clamps to 80-100 in lb. ml 10.07.28 ①

ml

10

07

28

①

240

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

5 10 07 28

②

| W/O: |      |  | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP |  | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |  |                    |    |      |     |                                     |                          |
|      |      |  |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |  |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|--|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |  |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |  |
|      |      |                                  |                             |                                 |                |                           |                       |                          |  |
|      |      |                                  |                             |                                 |                |                           |                       |                          |  |
|      |      |                                  |                             |                                 |                |                           |                       |                          |  |

**NOTE:** Date & initial all entries

**Work Order ID 60450**

July 8, 2010 8:55:07 AM

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Item ID: D212-664-201

Accept

Revision ID:

Item Name: Crosstube Aft

Start Date: 7/08/10 Start Qty: 1.00

Required Date: 7/12/10 Req'd Qty: 1.00

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Setup

Start

Stop

Run

Start

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool # Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

250

Pick Kit

0.00



Packaging

Memo

0.00

Packaging

260

QC4- 100% Inspect kits for completeness

0.00



QC

Memo

0.00

Quality Control

270

Packaging

0.00



Packaging

Memo

0.00

Packaging

Identify and pack for shipping as per PPP D212-664-201

Cup 7/22 @

40

Cup 7/22 @

| W/O: |      |  | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP |  | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |  |                    |    |      |     |                                     |                          |
|      |      |  |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

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Item ID: D212-664-201

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Setup Start



Revision ID:

Stop



Item Name: Crosstube Aft

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Cust Item ID:

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Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool # Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

280

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/07/30

10-7-30  
①

| W/O: |      |  | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP |  | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |  |                    |    |      |     |                                     |                          |
|      |      |  |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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|      |      |                                  | Initial<br>Chief Eng           | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                                |                                 |                |                           |                       |                          |
|      |      |                                  |                                |                                 |                |                           |                       |                          |
|      |      |                                  |                                |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

# Picklist Print

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Page 1

Work Order ID: 60450



Parent Item: D212-664-201



Parent Item Name: Crosstube Aft

Start Date: 7/08/10

Required Date: 7/12/10

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:E 04.02.16 Reformat K/DS  
 IPP Rev:F 06-03-29 Remove Comments on Pick List JLM  
 IPP Rev:G 07-04-30 As per Rev C JLM  
 IPP Rev:H 08-05-22 up date Qty of rubber cushion DD verified by:EC

| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|

D212-664-201TRN

Manufactured

No

110

Each

2.0000

1

1

MB

10-07-20

Crosstube Turning Detail

Location

Loc Qty

Loc Code

LG

2

59857

1

59858

1

D3595-063-530

Manufactured

No

230

Each

117.0000

2

2

RUBBER CUSHION

Location

Loc Qty

Loc Code

FP

80

50030

12

51776

68

LG

37

59581

37

D2940-1

Manufactured

No

230

Each

33.0000

2

2

Support

Location

Loc Qty

Loc Code

LG

33

45203

1

47748

12

57338

20

ml 10 07 20

ml 10 07 20

| W/O: |      |  | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP |  | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |  |                    |    |      |     |                                     |                          |
|      |      |  |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      |                                | WORK ORDER NON-CONFORMANCE (NCR) |                                 |                |                           |                       |                          |  |
|------|------|--------------------------------|----------------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|--|
| DATE | STEP | Description of NC<br>Section A | Corrective Action Section B      |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |  |
|      |      |                                | Initial<br>Chief Eng             | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |  |
|      |      |                                |                                  |                                 |                |                           |                       |                          |  |
|      |      |                                |                                  |                                 |                |                           |                       |                          |  |
|      |      |                                |                                  |                                 |                |                           |                       |                          |  |

**NOTE:** Date & initial all entries

# Picklist Print

July 8, 2010 8:55:06 AM

Page 2

Work Order ID: 60450

Parent Item: D212-664-201

Parent Item Name: Crosstube Aft



Start Date: 7/08/10

Required Date: 7/12/10

Start Qty: 1.00

Required Qty: 1.00

MS21920-28 Purchased No 230 Each 123.0000 4 4



Clamp(per MIL-DTL-8783C)

Location

Loc Qty

Loc Code

|        |     |  |
|--------|-----|--|
| FG     | 5   |  |
| 105884 | 5   |  |
| LG     | 118 |  |
| 112863 | 26  |  |
| 114749 | 92  |  |

D3428-1 Manufactured No 250 Each 8.0000 1 1



Placard

Location

Loc Qty

Loc Code

|       |   |  |
|-------|---|--|
| ST056 | 8 |  |
| 60133 | 8 |  |

MS21042L6 Purchased No 250 Each 204.0000 6 6



Nut

Location

Loc Qty

Loc Code

|        |     |  |
|--------|-----|--|
| ST300  | 204 |  |
| 111578 | 4   |  |
| 114495 | 200 |  |

AN9601D616 NAS1149D0663J Purchased No 250 Each 0.0000 18 18



Washer

W/ 10-07-27

h

60133  
6

h

111498

1114988 (6/17/28) (1)

July 8, 2010 8:55:06 AM

Shop Packet Print

Page 2

| W/O: |      |  | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP |  | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |  |                    |    |      |     |                                     |                          |
|      |      |  |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

# Picklist Print

July 8, 2010 8:55:06 AM

Page 3

Work Order ID: 60450

Parent Item: D212-664-201

Parent Item Name: Crosstube Aft



Start Date: 7/08/10

Required Date: 7/12/10

Start Qty: 1.00

Required Qty: 1.00

8 AN6-40A  
Bolt

Purchased No 250 Each 75.0000

4 4 ✓



*[Signature]*

Location

Loc Qty

Loc Code

ST343 75  
112828 25  
114283 50

*M112828*

\* AN6-41A  
Bolt

Purchased No 250 Each 56.0000

2 2 ✓



*Ce 10/7/08 (g)*

Location

Loc Qty

Loc Code

ST344 56  
112805 6  
113288 50

*A112805  
M113288*

July 8, 2010 8:55:06 AM

Shop Packet Print

Page 3

| W/O: |      |  | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP |  | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |  |                    |    |      |     |                                     |                          |
|      |      |  |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

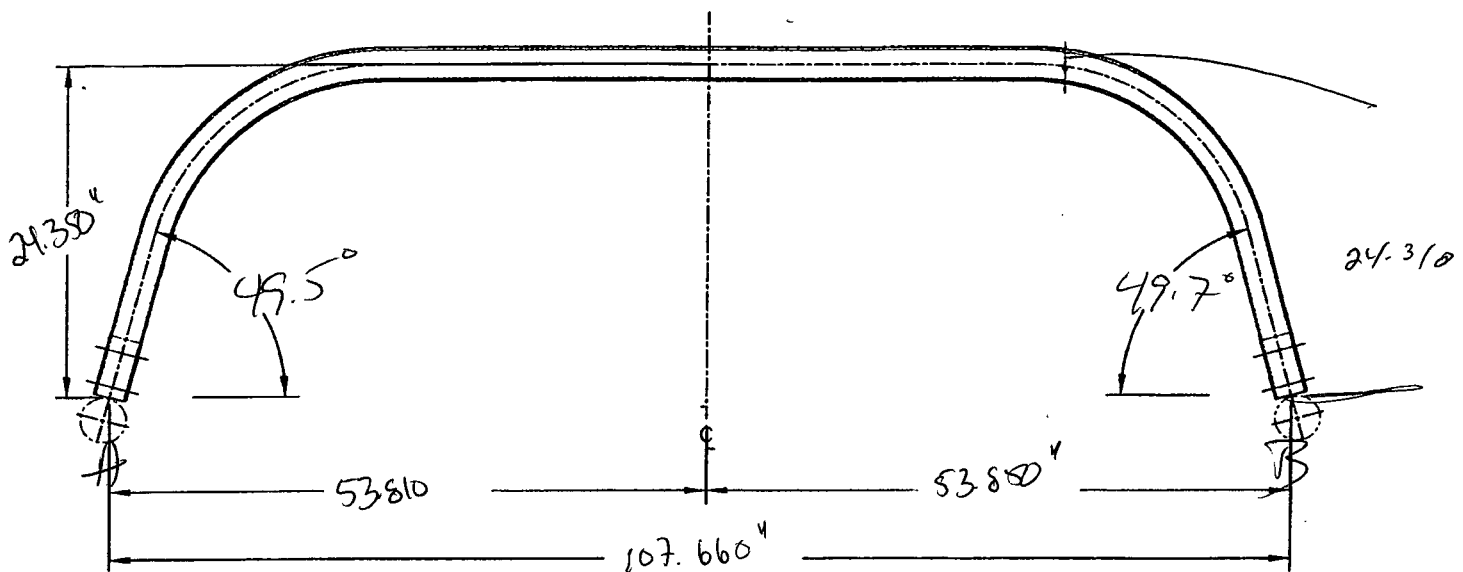
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |  |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|--|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |  |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |  |
|      |      |                                  |                             |                                 |                |                           |                       |                          |  |
|      |      |                                  |                             |                                 |                |                           |                       |                          |  |
|      |      |                                  |                             |                                 |                |                           |                       |                          |  |

**NOTE:** Date & initial all entries

|  |                     |                    |
|--|---------------------|--------------------|
| <b>DART AEROSPACE LTD</b>                        | <b>Work Order:</b>  | 60450              |
| <b>Description: Crosstube High Aft (205/212)</b> | <b>Part Number:</b> | D212-664-201       |
| <b>Inspection Dwg: D212-664-241</b>              | <b>Rev: D</b>       | <b>Page 1 of 1</b> |

| Required Dimension | Min    | Max    |
|--------------------|--------|--------|
| Height             | 24.17  | 24.43  |
| 1/2 Span           | 53.59  | 53.85  |
| Angle              | 49     | 52     |
| Total Span         | 107.18 | 107.70 |



| Comments |
|----------|
|          |
|          |
|          |
|          |

|                 |          |
|-----------------|----------|
| QC15 Inspection | 6        |
| Date            | 10/07/20 |

| Rev | Date     | Change                            | Revised by | Approved |
|-----|----------|-----------------------------------|------------|----------|
| A   | 07.02.06 | New Issue                         | KJ/JM      |          |
| B   | 07.05.08 | Dimensions updated per Dwg rev. C | KJ/JLM     |          |
| C   | 10.04.01 | Dwg Rev updated                   | KJ         |          |

| Item | Qty<br>-241 | Qty<br>-241B | Part Number    | Description   |
|------|-------------|--------------|----------------|---|
| 1    | X           |              | D212-664-241   | CROSSTUBE ASSEMBLY (205/212 HIGH AFT)   |
| 2    |             | X            | D212-664-241B  | CROSSTUBE ASSEMBLY (214 HIGH AFT)   |
| 3    | 1           | 1            | D6006-129      | CROSSTUBE   |
| 4    | 2           | 2            | D2940-1        | SUPPORT   |
| 5    | 4           | 4            | D3595-063-530  | RUBBER CUSHION  |
| 6    | 4           | 4            | MS21920-28     | CLAMP (OR MS21920-30)   |
| 7    | A/R         | A/R          | MAGNOBOND 6398 | ROCKWELL SPECIFICATION RBO-120-023<br>ADHESIVE (TEXTRON/BELL SPEC. 299-947-100,<br>TYPE II, CLASS 2 ADHESIVE) |

#### GENERAL NOTES:

- 1) MATERIAL: MANUFACTURED FROM D6006-129  
FINISHED LENGTH = 124.362±0.020
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2  
PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: SCRIBE DART PART NUMBER "D212-664-XXX" AND BATCH NUMBER ON INSIDE OF CUFF  
USING VIBRATING STYLUS.
- 7) WEIGHT: D212-664-241 = 44.2 lbs (PER IIN-D212-664)  
D212-664-241B = 44.2 lbs (PER IIN-D212-664)
- 8) PART IS SYMMETRIC ABOUT CENTERLINE.
- 9) RUN CUTTER OFF PART. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 5 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING  
IS 6% BASED ON O.D.
- 11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 12) INSTALL D2940-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 TO THE SURFACE  
OF D2940-1 THAT WILL BE IN CONTACT WITH THE CROSSTUBE PER QSI 015. LET CURE FOR 12 HOURS  
AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 13) INSTALL MS21920-28 CLAMPS (OR -30) WITH D3595-063-530 RUBBER CUSHIONS TO SECURE THE D2940-1  
SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMPS ARE OPPOSITE OF CROSSTUBE  
SUPPORT.
- 14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE  
SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR  
DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND  
MARKS ARE UNACCEPTABLE.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT  
HAS NOT BOTTOMED-OUT AFTER TORQUING.

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 60450  
CZ 10/7/8

RELEASED  
R' 2009-10-29  
M


|            |   |  |              |
|------------|---|--|--------------|
| D          | REFORMAT/REVISE GENERAL NOTES/PART LIST;<br>REORGANIZED VIEWS AND REFORMATTED DRAWING<br>TO CURRENT STANDARDS; ADD -241B (ZN D4-2, B4-2);<br>REMOVED REF & ADD TOLERANCES (ZN D8-3 & C4-3,<br>C6-3 & A8-3); RELOCATED FLAG #6 PER PAR 08-046 (ZN<br>A5-3); MOVED TURNING DETAIL & UPDATED TOLERANCE<br>TO SHEET 4 | RF   | 09.09.30     |
| C          | REMOVE -1009 ABRASION STRIP; ADD MAGNOBOND<br>6398, CUSHION, REVERSE CLAMPS   | PH   | 07.03.08     |
| B          | ADD HOLES FOR COMPATABILITY WITH BHT/AA<br>SKIDTUBES  | PH   | 05.02.04     |
| A          | NEW ISSUE   | PH   | 00.12.12     |
| REV.       | DESCRIPTION   | BY   | DATE         |
| DESIGN     | PH  | DART AEROSPACE LTD   |              |
| DRAWN      | RF  | HAWKESBURY, ONTARIO, CANADA  |              |
| CHECKED    | PH  | DRAWING NO.  | REV. D       |
| MFG. APPR. | PH  | D212-664-241   | SHEET 1 OF 4 |
| APPROVED   | PH  | TITLE  | SCALE        |
| DE APPR.   | PH  | CROSSTUBE ASS'Y (205/212 HI AFT)   | NTS          |
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8 7 6 5 4 3 2 1

12 13 15  
D2940-1 SUPPORT  
MS21920-28 CLAMP, 2X  
D3595-063-530 RUBBER CUSHION, 2X  
2 PL

A5-2


A

14.00 (-241)  
OR 13.75 (-241B) 

D212-664-601  
BENT TUBE

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 60450

CL  
SYM

D212-664-241/-241B   
ASSEMBLY DETAIL

12  
APPLY MAGNOBOND  
BETWEEN D2940-1 AND  
CROSSTUBE

D2940-1 SUPPORT, REF

13 15  
MS21920-28  
CLAMP, REF

D3595-063-530 RUBBER CUSHION  
UNDER CLAMP, REF

SECTION A-A  
SCALE 4X D6-2

RELEASED  
2009-10-28

|            |          |   |              |
|------------|----------|---|--------------|
| DESIGN     | PH       | DART AEROSPACE LTD  |              |
| DRAWN      | RF       | HAWKESBURY, ONTARIO, CANADA   |              |
| CHECKED    | Q        | DRAWING NO.   | REV. D       |
| MFG. APPR. | DS       | D212-664-241  | SHEET 2 OF 4 |
| APPROVED   | AP       | TITLE   | SCALE        |
| DE APPR.   | AP       | CROSSTUBE ASS'Y (205/212 HI AFT)  | NTS          |
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8 7 6 5 4 3 2 1

**D212-664-601** 10 D  
BENDING AND DRILLING DETAIL

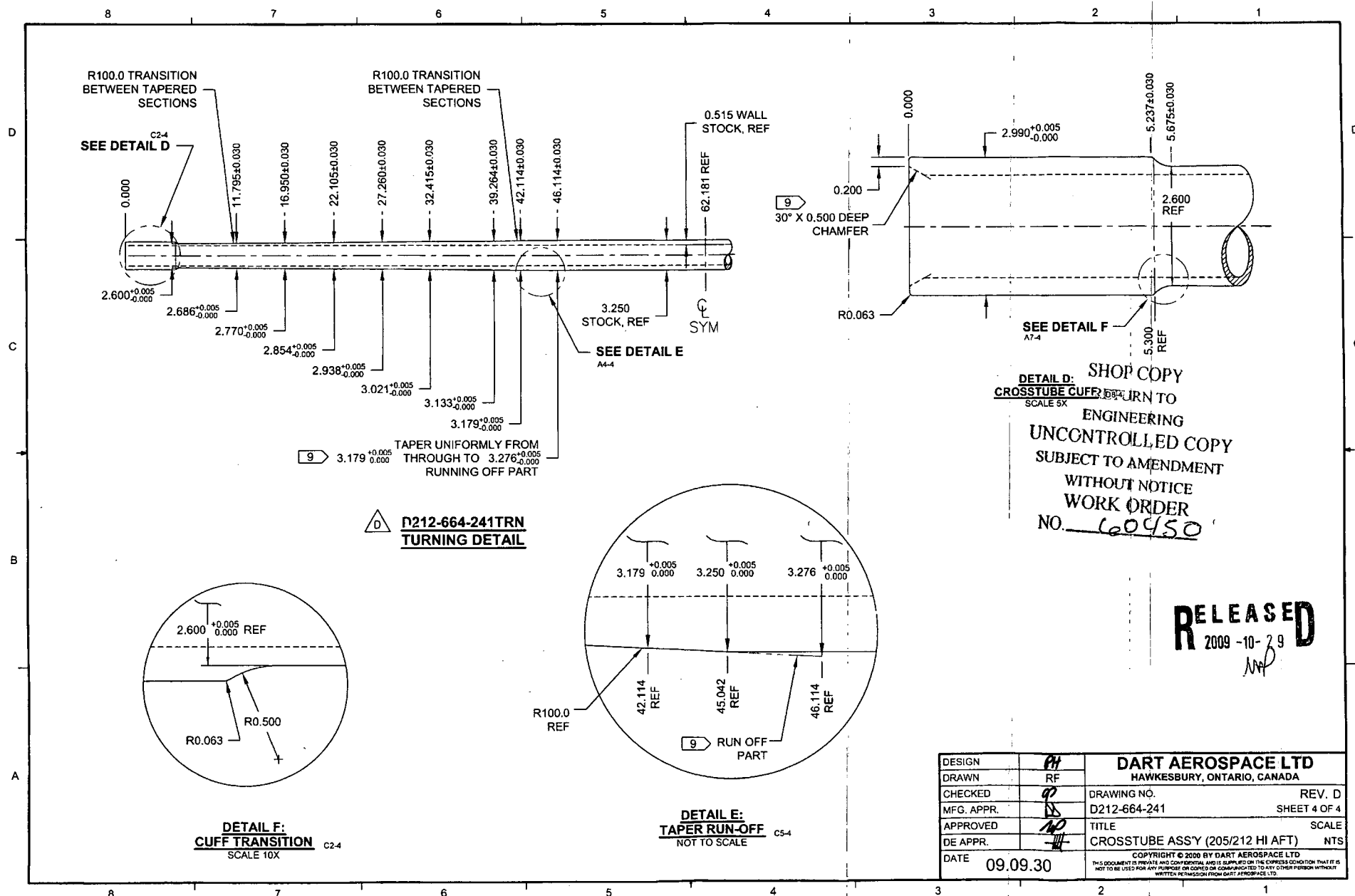
UNCONTROLLED COPY  
 SUBJECT TO AMENDMENT  
 WITHOUT NOTICE  
 WORK ORDER  
 NO. 60450

**RELEASED**  
 2009-10-29

VIEW C-C: CUFF DETAIL D2-3  
 SCALE 3X

SECTION B-B D4-3  
 SCALE 4X

|            |          |   |              |
|------------|----------|---|--------------|
| DESIGN     | PH       | <b>DART AEROSPACE LTD</b>   |              |
| DRAWN      | RF       | HAWKESBURY, ONTARIO, CANADA   |              |
| CHECKED    | GP       | DRAWING NO.   | REV. D       |
| MFG. APPR. | DS       | D212-664-241  | SHEET 3 OF 4 |
| APPROVED   | AP       | TITLE   | SCALE        |
| DE APPR.   | HL       | CROSSTUBE ASS'Y (205/212 HI AFT)  | NTS          |
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## LIQUID PENETRANT TEST REPORT

P- 15183

PAGE 1 OF 1

CLIENT DART Aerospace DATE July-22-2010 TIME AM ☒ PM ☐  
ATTENTION LINDA/CHANTEL ACUREN JOB NO. 188-10-0801  
ADDRESS 1270 ABELDEEN ST PO/WO No. 172309  
HAWKES BURY ON. WORK LOCATION HAWKESBURY - ON, SHOP  
KGH 1K7 ACCEPTANCE STD. ASTM 1417 REV./DATE 2007  
PROJECT F. P. I. ON CROSS TUBES  
ITEM(S) EXAMINED 5 UNITS

JOB DESCRIPTION PROCEDURE NO. LT-002 REV./DATE TECHNIQUE NO. LT-1242 REV./DATE  
PART NO. MATERIAL ALUMINUM THICKNESS  
SCOPE WET FLUORESCENT LIQUID PENETRANT INSPECTION  
CARRIED OUT 100% EXTERNAL

TEST DETAILS  
METHOD ☒ FLUORESCENT ☐ VISIBLE ☒ WATER WASH ☐ SOLVENT REMOVABLE ☐ POST EMULSIFIED  
FAMILY BRAND MASNA FLUX BLACK LIGHT S/N 16459 ☐ OUTPUT > 1000  $\mu$ W/cm<sup>2</sup> ☐ AMBIENT < 2 fc  
PENETRANT 2LG7 MINIMUM DWELL TIME 45 MIN. LIGHTING EQUIP. ☐ FLASHLIGHT ☐ TROUBLELIGHT ☐ OUTPUT > 100 fc @ SURFACE  
PENETRANT REMOVER H2O MINIMUM DRY TIME >10 MIN. OTHER L.A. BLUE  
DEVELOPER SKD 52 MINIMUM DWELL TIME 10 MIN. LIGHT METER S/N 1098866 CAL DUE DATE OCT 19  
DEVELOPER TYPE ☒ NON AQUEOUS ☐ AQUEOUS ☐ DRY

TEST SURFACE  
SURFACE CONDITION ☐ AS GROUND ☐ AS WELDED ☒ MACHINED ☐ SHOT BLASTED ☐ CLEAN BARE METAL  
SURFACE TEMPERATURE ☐ < -4°C/ 20°F ☐ -4°C/ 20°F TO 10°C/50°F ☐ 10°C/50°F TO 52°C/125°F ☐ > 52°C/125°F

RESULTS- ☐ METRIC ☐ IMPERIAL

1 - Crosstube, W.O. 60557 ✓  
1 - Crosstube, W.O. 60556 ✓  
1 - Crosstube, W.O. 60449 ✓  
1 - Crosstube, W.O. 60950 ✓  
1 - Crosstube, W.O. 60257 ✓

10 OCT 26

## Scope of Services

The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as representations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of the data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.

## Standard of Care

In performing the services provided, Acuren Group Inc. uses the degree of care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

## SIGNATURES

CLIENT REPRESENTATIVE Jason Murdoch DTR # E 27917  
TECHNICIAN (SIGNATURE): [Signature] SIGNATURE  
NAME (PRINT): Mike Johnston REPORT REVIEWED BY:  
1<sup>st</sup> TECHNICIAN 2<sup>nd</sup> TECHNICIAN  
CGSB LEVEL # SNT LEVEL CGSB LEVEL SNT LEVEL  
CGSB REG. NO. 66006 CGSB REG. NO.

WHITE - CLIENT COPY

CANARY - OFFICE COPY

PINK - TECHNICIAN COPY

GOLD - OFFICE COPY

[illegible]

Page 2

**Accept**

**Setup Start**

**Stop**

**Abstract**

**Cust Item ID:**

**Abstract**

**Customer:** CU-DAR001

**Approvals:**      **Process Plan:**                      **Date:**                      **Tooling:**                      **Date:**

Run Start

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

**Stop**

### Operation Description

### Set Up/ Run Hours

**Tool ID**

Tool #

**Plan  
Code**

| Accept | Qty |
|--------|-----|
|--------|-----|

Reject  
Qty

## Reject Number

**Insp.  
Stamp**

110

0.00

## Crosstubes

## Crosstubes

## Memo

0.00

- BUFF CORROSION
- ACID ETCH AND ALODINE
- RE-PRIME UNDER SUPPORTS, REINSTALL SUPPORTS

allow primer to dry for 4 hrs min } at 11-01-18  
then assemble

66

Outsource

LPI per OSI

PD. 13250

C Lillo 10/10 (41)  
C Lillo 10/10

→ QCS - inspect summits → Solutions

QC21- Final Inspection - Work Order Release

0.00

1120

đc

Quality Control

## Memo

0.00

| W/O: 64547 |      | WORK ORDER CHANGES  |    |          |     |                                     |                          |  |
|------------|------|---|----|----------|-----|-------------------------------------|--------------------------|--|
| DATE       | STEP | PROCEDURE CHANGE  | By | Date     | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |  |
| 11-01-10   | 110  | prime inside of original supports leave exterior S/S  | ET | 11-01-10 | x 2 | W<br>11-01-11                       | S<br>initial             |  |
| 11-01-10   | 110  | install new clamps MS21920-28 B <u>m 114749</u><br>install new rubber strips Q3595-063-530 B <u>59581</u> | ET | 11-01-10 |     | W<br>11-01-11                       | S<br>initial             |  |

Part No: D212-664-201 PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

NOTE: Date & initial all entries

**Work Order ID 64547**

December 21, 2010 2:30:33 PM

Page 3

Item ID: D212-664-201

Accept

Setup Start

Revision ID:

Stop

Item Name: Crosstube Aft

Start Date: 12/08/10 Start Qty: 1.00

Required Date: 12/09/10 Req'd Qty: 1.00

Cust Item ID:

Customer: CU-DAR001

Reference: RMA RA110139

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start

Stop

| Sequence ID/<br>Work Center ID | Operation<br>Description            | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|-------------------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 1150                           |                                     | 0.00                 |         |        |              |               |               |                  |                |
| Packaging                      |                                     |                      |         |        |              |               |               |                  |                |
| Packaging                      | Memo<br>PACKAGE, RETURN TO CUSTOMER | 0.00                 |         |        |              |               |               |                  |                |

Ac 21 -

Co 11/21/11 ①  
11/01/12 J  
11/26/11

# Picklist Print

December 21, 2010 2:30:31 PM

Work Order ID: 64547

Parent Item: D212-664-201

Parent Item Name: Crosstube Aft



Start Date: 12/08/10

Required Date: 12/09/10

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:E 04.02.16 Reformat K/DS  
 IPP Rev:F 06-03-29 Remove Coments on Pick List JLM  
 IPP Rev:G 07-04-30 As per Rev C JLM  
 IPP Rev:H 08-05-22 up date Qty of rubber cushion DD verified by:EC

| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
| D212-664-201                    |                        | Manufactured  | No          |                     |                  |                 | Each               | 10.0000        |             | 1            |               |                |        |
|                                 |                        |               |             |                     |                  |                 |                    |                |             |              |               |                |        |
| Crosstube Aft                   |                        |               |             |                     |                  |                 |                    |                |             |              |               |                |        |

| Location | Loc Qty | Loc Code |
|----------|---------|----------|
| FG       | 1       |          |
| 38844    | 1       |          |
| 39659    | 1       |          |
| 60449    | 1       |          |
| FG103    | 7       |          |
| 60523    | 1       |          |
| 60524    | 1       |          |
| 60557    | 1       |          |
| 61738    | 1       |          |
| 61739    | 1       |          |
| 63538    | 1       |          |
| 63539    | 1       |          |

60450 customer Return

h

**L Lacelle**

**From:** Bill Beckett [bbeckett@dartaero.com]  
**Sent:** December 20, 2010 12:55 PM  
**To:** 'Peggy McDonald'; swillems@dartaero.com; 'L Lacelle'  
**Cc:** 'Marc Bellavance'; Jason Murdoch; 'Stow, Dan'; Susanne Sheldon; 'Mike Petsche'; 'David Shepherd'  
**Subject:** RE: Crosstube corrosion from Expedition

Peggy – ok, this is fine.

Sian – no-charge on a CSR. Please indicate ship date (talk to LL).

Linda – pls prepare work order **NB – no priming!** Ensure interior is protected during etch and alodine.

Bill

**From:** Peggy McDonald [mailto:peggy@darths.com]  
**Sent:** December 20, 2010 12:48 PM  
**To:** Bill Beckett  
**Cc:** Marc Bellavance  
**Subject:** Crosstube corrosion from Expedition  
**Importance:** High

Hi Bill,

I spoke with Expedition this morning about the crosstube corrosion issue.

To resolve the issue, I took your recommendation and offered the crosstube rework at no charge.  
 (removal of the surface corrosion, acid etch and alodine)

**PLEASE NOTE : the customer will do their own priming right before paint.**

These can be returned to them early in the new year.

I recommend a MISC no charge PO to be sent to DAS.

Freight will be on the DHS account.

Please advise how you would like DHS to proceed.

Peggy

*- Buff corrosion  
 - acid etch  
 - alodine  
 - reassemble; prime under supports*

*64541  
 547  
 60522  
 60450*

**PLEASE NOTE OUR NEW CORPORATE OFFICE ADDRESS: 4650 North Avenue, Oceanside, California 92056**

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12/20/10

# Work Order ID 64547

December 8, 2010 8:52:43 AM



Page 1

Item ID: D212-664-201

Accept



Setup Start



Revision ID:

Stop



Item Name: Crosstube Aft

Start Date: 12/08/10 Start Qty: 1.00



Cust Item ID:

Required Date: 12/09/10 Req'd Qty: 1.00



Customer: CU-DAR001

Reference: RMA RA110139

Approvals:

Process Plan: U

Date: \_\_\_\_\_

Tooling: \_\_\_\_\_

Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_

Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_

Date: \_\_\_\_\_

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D212-664-241

Rev D

100

0.00



QC

Memo

0.00

Quality Control

INSPECT RA110139

**Work Order ID 64547**

December 8, 2010 8:52:43 AM

Page 2



Item ID: D212-664-201

Accept



Setup Start



Revision ID:

Stop



Item Name: Crosstube Aft

Start Date: 12/08/10 Start Qty: 1.00



Cust Item ID:

Required Date: 12/09/10 Req'd Qty: 1.00



Customer: CU-DAR001

Reference: RMA RA110139

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop



| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

110

0.00



Crosstubes

Memo

0.00

Crosstubes

Verified by: *ml/ml* 10/11/08*ml* 10 11 08 (1)

120

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

verified by

| Step   | Remove the 2 supports (No corrosion found)                            |
|--------|---|
| Step 1 | Remove the 2 supports (No corrosion found)                            |
| Step 2 | TalStrip II Paint Stripped Coat 1 M115424 (Picture taken)             |
| Step 3 | re-apply Paint Stripped Coat 2 M115424 (Picture taken)                |
| Step 4 | used plastic squeegee to remove Paint + Manganese                     |
| Step 5 | visually inspected no corrosion seen & Alodine intact (Picture taken) |



# LIQUID PENETRANT TEST REPORT

P- 15201

|                  |                                      |                 |               |               |                  |                                     |    |                          |
|------------------|--------------------------------------|-----------------|---------------|---------------|------------------|-------------------------------------|----|--------------------------|
| CLIENT           | DACT Aerospace                       | DATE            | Jan. 10, 2011 | PAGE          | 1                | OF                                  | 1  |                          |
| ATTENTION        | LINDA LACELLE                        | ACUREN JOB NO.  | 188-11-2008   | TIME          | AM               | <input checked="" type="checkbox"/> | PM | <input type="checkbox"/> |
| ADDRESS          | 1270 ABERDEEN ST<br>HAWKES BURY, CN. | PO/VO No.       |               | WORK LOCATION | Hawkesbury Plant |                                     |    |                          |
| PROJECT          | F. P. I.                             | ACCEPTANCE STD. | ASTM 1417     | REV./DATE     | 2005             |                                     |    |                          |
| ITEM(S) EXAMINED | 6 CROSS TUBES<br>2 ENGINE MOUNTS     |                 |               |               |                  |                                     |    |                          |

|                 |   |           |      |                      |           |      |
|-----------------|---|-----------|------|----------------------|-----------|------|
| JOB DESCRIPTION | PROCEDURE NO. LT-001  | REV./DATE | 2008 | TECHNIQUE NO. LT-002 | REV./DATE | 2008 |
| PART NO.        | MATERIAL Aluminum THICKNESS VARIOUS                                     |           |      |                      |           |      |
| SCOPE           | WET FLUORESCENT LIQUID PENETRANT INSPECTION<br>COPIED OUT 100% EXTERNAL |           |      |                      |           |      |

|  |   |
|--|---|
| TEST DETAILS   |   |
| METHOD   | <input checked="" type="checkbox"/> FLUORESCENT <input type="checkbox"/> VISIBLE                              |
| FAMILY BRAND   | MAINA Flux  |
| PENETRANT  | 2LG7 MINIMUM DWELL TIME 45 MIN.   |
| PENETRANT REMOVER  | H2O MINIMUM DRY TIME >10 MIN.   |
| DEVELOPER  | SAD52 MINIMUM DWELL TIME 10 MIN.  |
| DEVELOPER TYPE   | <input checked="" type="checkbox"/> NON AQUEOUS <input type="checkbox"/> AQUEOUS <input type="checkbox"/> DRY |
| WATER WASH <input checked="" type="checkbox"/> SOLVENT REMOVABLE <input type="checkbox"/> POST EMULSIFIED                                    |   |
| BLACK LIGHT S/N 18454 <input type="checkbox"/> OUTPUT > 1000 $\mu$ W/cm <sup>2</sup> <input type="checkbox"/> AMBIENT < 2 fc                 |   |
| LIGHTING EQUIP. <input type="checkbox"/> FLASHLIGHT <input type="checkbox"/> TROUBLELIGHT <input type="checkbox"/> OUTPUT > 100 fc @ SURFACE |   |
| OTHER LAB. NO.   |   |
| LIGHT METER S/N 1048866 CAL DUE DATE 06-19-2011  |   |

|                     |   |
|---------------------|---|
| TEST SURFACE        |   |
| SURFACE CONDITION   | <input type="checkbox"/> AS GROUND <input type="checkbox"/> AS WELDED <input type="checkbox"/> MACHINED <input type="checkbox"/> SHOT BLASTED <input type="checkbox"/> CLEAN BARE METAL |
| SURFACE TEMPERATURE | <input type="checkbox"/> < -4°C/ 20°F <input type="checkbox"/> -4°C/ 20°F TO 10°C/ 50°F <input type="checkbox"/> 10°C/ 50°F TO 52°C/ 125°F <input type="checkbox"/> > 52°C/ 125°F       |

|          |   |
|----------|---|
| RESULTS- | <input type="checkbox"/> METRIC <input type="checkbox"/> IMPERIAL |
|----------|---|

|                              |   |
|------------------------------|---|
| 1 - CROSS TUBE - W.C. 63783  | ✓ |
| 1 - CROSS TUBE - W.C. 63484  | ✓ |
| 1 - CROSS TUBE - W.C. 63573  | ✓ |
| 1 - CROSS TUBE - W.C. 63524  | ✓ |
| 1 - CROSS TUBE - W.C. 64541  | ✓ |
| 1 - CROSS TUBE - W.C. 64547  | ✓ |
| 1 - REPLACEMENT ENGINE MOUNT | ✓ |
| - W.C. 63456 - D3607-1       | ✓ |
| 1 - H2O D3607-3              | ✓ |

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The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as representations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of the data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.

**Standard of Care**  
In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

|                         |   |
|-------------------------|---|
| SIGNATURES              |   |
| CLIENT REPRESENTATIVE   | PRINT: Dan Titley                       |
| TECHNICIAN (SIGNATURE): | SIGNATURE: [Signature]                  |
| NAME (PRINT):           | 1 <sup>ST</sup> TECHNICIAN: [Signature] |
|                         | 2 <sup>ND</sup> TECHNICIAN: [Signature] |
| CGSB LEVEL              | SNT LEVEL                               |
| CGSB REG. NO.           | CGSB REG. NO.                           |
| DTR # EG3740            |   |
| REPORT REVIEWED BY:     |   |
| NAME                    | INITIALS                                |

WHITE - CLIENT COPY

CANARY - OFFICE COPY

PINK - TECHNICIAN COPY

GOLD - OFFICE COPY

| Item | Qty<br>-241 | Qty<br>-241B | Part Number    | Description   |
|------|-------------|--------------|----------------|---|
| 1    | X           |              | D212-664-241   | CROSSTUBE ASSEMBLY (205/212 HIGH AFT)   |
| 2    |             | X            | D212-664-241B  | CROSSTUBE ASSEMBLY (214 HIGH AFT)   |
| 3    | 1           | 1            | D6006-129      | CROSSTUBE   |
| 4    | 2           | 2            | D2940-1        | SUPPORT   |
| 5    | 4           | 4            | D3595-063-530  | RUBBER CUSHION  |
| 6    | 4           | 4            | MS21920-28     | CLAMP (OR MS21920-30)   |
| 7    | A/R         | A/R          | MAGNOBOND 6398 | ROCKWELL SPECIFICATION RBO-120-023<br>ADHESIVE (TEXTRON/BELL SPEC. 299-947-100,<br>TYPE II, CLASS 2 ADHESIVE) |

# **GENERAL NOTES:**

- 1) MATERIAL: MANUFACTURED FROM D6006-129  
FINISHED LENGTH = 124.362±0.020
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2  
PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: SCRIBE DART PART NUMBER "D212-664-XXX" AND BATCH NUMBER ON INSIDE OF CUFF USING VIBRATING STYLUS.
- 7) WEIGHT: D212-664-241 = 44.2 lbs (PER IIN-D212-664)  
D212-664-241B = 44.2 lbs (PER IIN-D212-664)
- 8) PART IS SYMMETRIC ABOUT CENTERLINE.
- 9) RUN CUTTER OFF PART. BLEND OUT EDGE LONGITUDINALLY. TRANSITION SHOULD BE SMOOTH.
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 5 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 12) INSTALL D2940-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 TO THE SURFACE OF D2940-1 THAT WILL BE IN CONTACT WITH THE CROSSTUBE PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 13) INSTALL MS21920-28 CLAMPS (OR -30) WITH D3595-063-530 RUBBER CUSHIONS TO SECURE THE D2940-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMPS ARE OPPOSITE OF CROSSTUBE SUPPORT.
- 14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

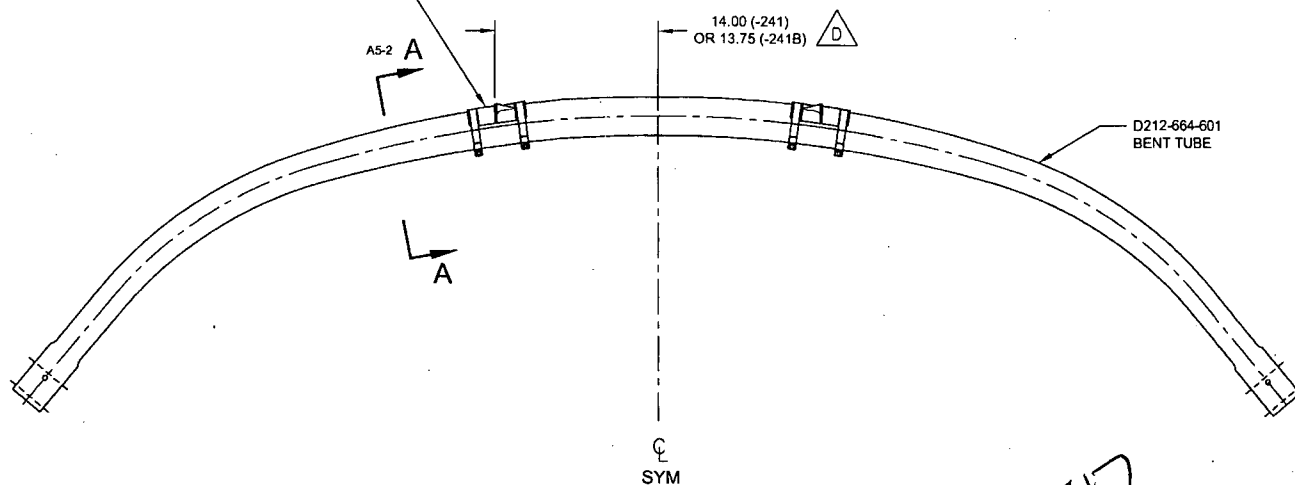
|            |   |                                  |              |
|------------|---|----------------------------------|--------------|
| D          | REFORMAT/REVISE GENERAL NOTES/PART LIST;<br>REORGANIZED VIEWS AND REFORMATTED DRAWING<br>TO CURRENT STANDARDS; ADD -241B (ZN D4-2, B4-2);<br>REMOVED REF & ADD TOLERANCES (ZN D8-3 & C4-3,<br>C8-3 & A8-3); RELOCATED FLAG #6 PER PAR 08-046 (ZN<br>A8-3); MOVED TURNING DETAIL & UPDATED TOLERANCE<br>TO SHEET 4 | RF                               | 09.09.30     |
| C          | REMOVE -1009 ABRASION STRIP; ADD MAGNOBOND<br>6398, CUSHION, REVERSE CLAMPS   | PH                               | 07.03.08     |
| B          | ADD HOLES FOR COMPATABILITY WITH BHT/AA<br>SKIDTUBES  | PH                               | 05.02.04     |
| A          | NEW ISSUE   | PH                               | 00.12.12     |
| REV.       | DESCRIPTION   | BY                               | DATE         |
| DESIGN     | PH  | <b>DART AEROSPACE LTD</b>        |              |
| DRAWN      | RF  | HAWKESBURY, ONTARIO, CANADA      |              |
| CHECKED    | PH  | DRAWING NO.                      | REV. D       |
| MFG. APPR. | PH  | D212-664-241                     | SHEET 1 OF 4 |
| APPROVED   | PH  | TITLE                            | SCALE        |
| DATE       | 09.09.30  | CROSSTUBE ASS'Y (205/212 HI AFT) | NTS          |

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**RELEASED**  
2009-10-29

64547

12 13 15  
 D2940-1 SUPPORT  
 MS21920-28 CLAMP, 2X  
 D3595-063-530 RUBBER CUSHION, 2X  
 2 PL

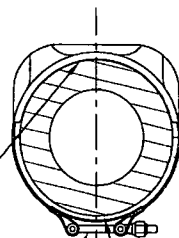


**D212-664-241/-241B  
 ASSEMBLY DETAIL** D

64547

12  
 APPLY MAGNOBOND  
 BETWEEN D2940-1 AND  
 CROSSTUBE

13 15  
 MS21920-28  
 CLAMP, REF



D2940-1 SUPPORT, REF

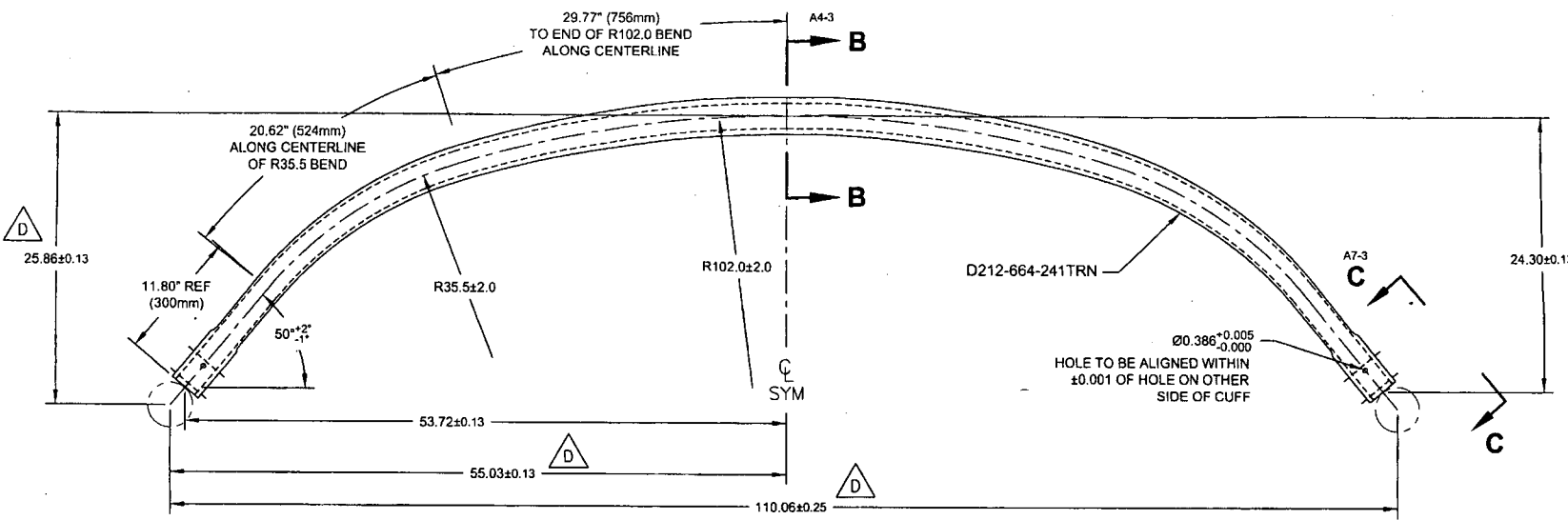
D3595-063-530 RUBBER CUSHION  
 UNDER CLAMP, REF

**SECTION A-A** D6-2  
 SCALE 4X

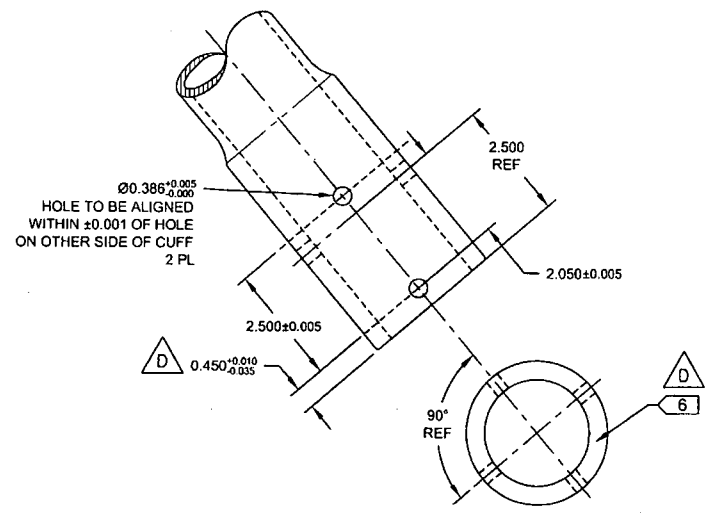
**RELEASED**  
 2009-10-28

|            |          |   |              |
|------------|----------|---|--------------|
| DESIGN     | PH       | <b>DART AEROSPACE LTD</b>   |              |
| DRAWN      | RF       | HAWKESBURY, ONTARIO, CANADA   |              |
| CHECKED    | PH       | DRAWING NO.   | REV. D       |
| MFG. APPR. | PH       | D212-664-241  | SHEET 2 OF 4 |
| APPROVED   | PH       | TITLE   | SCALE        |
| DE APPR.   | PH       | CROSSTUBE ASS'Y (205/212 HI AFT)  | NTS          |
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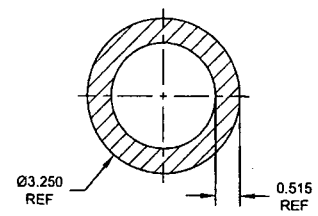
8 7 6 5 4 3 2 1



**D212-664-601** 10 D  
**BENDING AND DRILLING DETAIL**



**VIEW C-C: CUFF DETAIL** D2-3  
 SCALE 3X



**SECTION B-B** D4-3  
 SCALE 4X

64547

**RELEASED**  
 2009-10-29

|            |          |   |              |
|------------|----------|---|--------------|
| DESIGN     | PH       | <b>DART AEROSPACE LTD</b>   |              |
| DRAWN      | RF       | HAWKESBURY, ONTARIO, CANADA   |              |
| CHECKED    | 98       | DRAWING NO.   | REV. D       |
| MFG. APPR. | 10       | D212-664-241  | SHEET 3 OF 4 |
| APPROVED   | 10       | TITLE   | SCALE        |
| DE APPR.   | 10       | CROSSTUBE ASS'Y (205/212 IN. AFT)   | NTS          |
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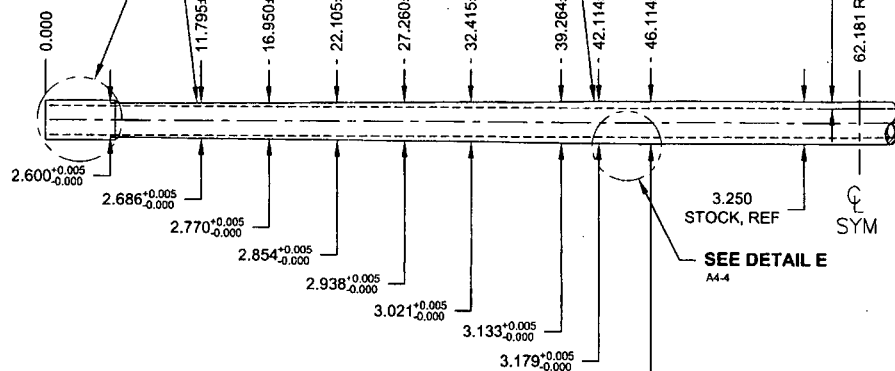
8 7 6 5 4 3 2 1

R100.0 TRANSITION  
BETWEEN TAPERED  
SECTIONS

R100.0 TRANSITION  
BETWEEN TAPERED  
SECTIONS

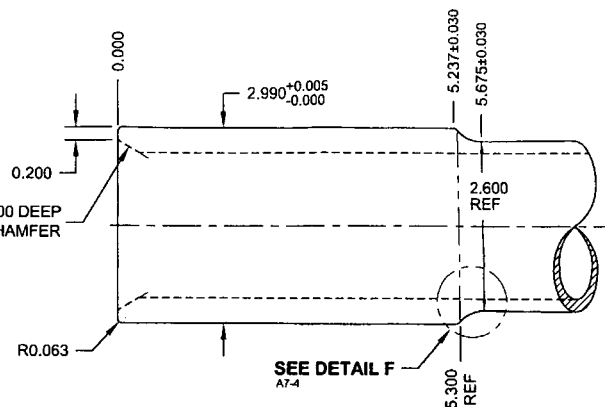
0.515 WALL  
STOCK, REF

SEE DETAIL D  
C2-4



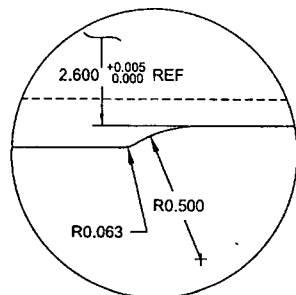
9  
30° X 0.500 DEEP  
CHAMFER

SEE DETAIL E  
A4-4

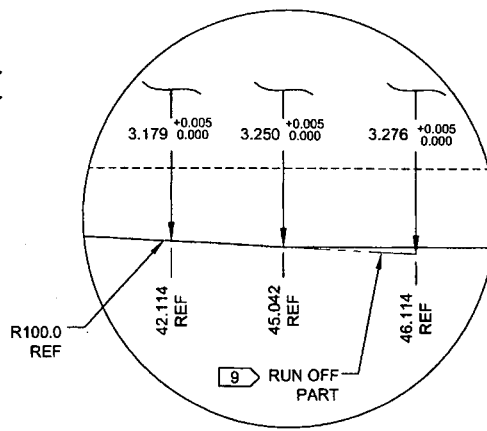


DETAIL D:  
CROSSTUBE CUFF D8-4  
SCALE 5X

D212-664-241TRN  
TURNING DETAIL



DETAIL F:  
CLIFF TRANSITION C2-4  
SCALE 10X



DETAIL E:  
TAPER RUN-OFF C5-4  
NOT TO SCALE

64547

RELEASED  
2009-10-29

|            |          |  |              |
|------------|----------|--|--------------|
| DESIGN     | PH       | DART AEROSPACE LTD   |              |
| DRAWN      | RF       | HAWKESBURY, ONTARIO, CANADA  |              |
| CHECKED    | Q        | DRAWING NO.  | REV. D       |
| MFG. APPR. | DS       | D212-664-241   | SHEET 4 OF 4 |
| APPROVED   | 10       | TITLE  | SCALE        |
| DE APPR.   | 11       | CROSSTUBE ASS'Y (205/212 HI AFT)   | NTS          |
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## Kim Johnston

---

**From:** L Lacelle <llacelle@dartaero.com>  
**Sent:** Wednesday, January 12, 2011 9:04 AM  
**To:** 'Kim Johnston'  
**Subject:** FW: Crosstube corrosion from Expedition

That's for the 2 w/o's you rec'd yesterday

---

**From:** the.sheldons@sympatico.ca [mailto:the.sheldons@sympatico.ca] **On Behalf Of** Susanne Sheldon  
**Sent:** January 12, 2011 8:22 AM  
**To:** 'L Lacelle'  
**Cc:** 'Stow, Dan'; swillems@dartaero.com; 'Marc Bellavance'; 'Jason Murdoch'; 'David Shepherd'; 'Bill Beckett'  
**Subject:** RE: Crosstube corrosion from Expedition

I suggest keeping the same batch number and reference the re-work work order on the old work order for traceability  
Susanne

---

**From:** L Lacelle [mailto:llacelle@dartaero.com]  
**Sent:** January 11, 2011 8:47 AM  
**To:** 'Susanne Sheldon'  
**Cc:** 'Stow, Dan'; swillems@dartaero.com; 'Marc Bellavance'; 'Jason Murdoch'; 'David Shepherd'; 'Bill Beckett'  
**Subject:** RE: Crosstube corrosion from Expedition  
**Importance:** High

So these have been NDT'd and supports re-installed, all of this was done on w/o's, so my question is, do we send them out under the new B/N ? IF we do, this will screw up our costs of D212-664-101 & -201, as there was no cost entered in the RMA. Any suggestions?

LL

---

**From:** David Shepherd [mailto:dshepherd@dartaero.com]  
**Sent:** January 5, 2011 5:21 PM  
**To:** 'Jason Murdoch'; 'L Lacelle'; 'Marc Bellavance'  
**Cc:** 'Stow, Dan'; 'Susanne Sheldon'; 'Mike Petsche'; swillems@dartaero.com; 'Bill Beckett'  
**Subject:** RE: Crosstube corrosion from Expedition

Jason,

I would recommend that we NDT them.

David

---

**From:** Jason Murdoch [mailto:jmurdoch@dartaero.com]  
**Sent:** Wednesday, January 05, 2011 1:59 PM  
**To:** 'L Lacelle'; 'Marc Bellavance'  
**Cc:** 'Stow, Dan'; 'Susanne Sheldon'; 'Mike Petsche'; 'David Shepherd'; swillems@dartaero.com; 'Bill Beckett'  
**Subject:** RE: Crosstube corrosion from Expedition

Will these tubes be NDT'd before they ship back to the customer? I do not want DART being held responsible for any issues that might occur down the road.....ya mean?

**Jason Murdoch**  
**Quality Coordinator**  
[jmurdoch@dartaero.com](mailto:jmurdoch@dartaero.com)  
**DART Aerospace Ltd.**  
**613-632-5200**

---

**From:** L Lacelle [mailto:llacelle@dartaero.com]  
**Sent:** Wednesday, January 05, 2011 1:55 PM  
**To:** 'Marc Bellavance'  
**Cc:** 'Jason Murdoch'; 'Stow, Dan'; 'Susanne Sheldon'; 'Mike Petsche'; 'David Shepherd'; swillems@dartaero.com; 'Bill Beckett'  
**Subject:** RE: Crosstube corrosion from Expedition

With everyone gone for the last couple of weeks no one really touched them. They will get ground today, and alodined and we should be able to ship out by Friday.

LL

---

**From:** Marc Bellavance [mailto:mbellavance@dartaero.com]  
**Sent:** January 5, 2011 1:49 PM  
**To:** 'L Lacelle'  
**Cc:** 'Jason Murdoch'; 'Stow, Dan'; 'Susanne Sheldon'; 'Mike Petsche'; 'David Shepherd'; swillems@dartaero.com; 'Bill Beckett'  
**Subject:** RE: Crosstube corrosion from Expedition  
**Importance:** High

Linda,

Where are we with this? Customer wants to know.

**Marc Bellavance**  
**Technical/Shop Support**

***DART*** aerospace Ltd.

Tel: 613-632-5200 Ext. 243

Cel: 613-676-0992

Fax: 613-632-9311

E-mail: [mbellavance@dartaero.com](mailto:mbellavance@dartaero.com)

Web: [www.dartaero.com](http://www.dartaero.com)

**Product Documentation: Verify Revision Status/Download [HERE!](#)**



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**From:** Bill Beckett [mailto:bbeckett@dartaero.com]  
**Sent:** December 20, 2010 12:55 PM  
**To:** 'Peggy McDonald'; swillems@dartaero.com; 'L Lacelle'  
**Cc:** 'Marc Bellavance'; Jason Murdoch; 'Stow, Dan'; Susanne Sheldon; 'Mike Petsche'; 'David Shepherd'  
**Subject:** RE: Crosstube corrosion from Expedition

Peggy – ok, this is fine.

Sian – no-charge on a CSR. Please indicate ship date (talk to LL).

Linda – pls prepare work order **NB – no priming!** Ensure interior is protected during etch and alodine.

Bill

---

**From:** Peggy McDonald [mailto:peggy@darths.com]

**Sent:** December 20, 2010 12:48 PM

**To:** Bill Beckett

**Cc:** Marc Bellavance

**Subject:** Crosstube corrosion from Expedition

**Importance:** High

Hi Bill,

I spoke with Expedition this morning about the crosstube corrosion issue.

To resolve the issue, I took your recommendation and offered the crosstube rework at no charge.  
(removal of the surface corrosion, acid etch and alodine)

**PLEASE NOTE : the customer will do their own priming right before paint.**

These can be returned to them early in the new year.

I recommend a MISC no charge PO to be sent to DAS.

Freight will be on the DHS account.

Please advise how you would like DHS to proceed.

Peggy

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**PLEASE NOTE OUR NEW CORPORATE OFFICE ADDRESS: 4650 North Avenue, Oceanside, California 92056**

**Disclaimer** - This email and any files transmitted with it are confidential and may contain privileged or copyright information. You must not present this message to another party without gaining permission from the sender. If you are not the intended recipient you must not copy, distribute or use this email or the information contained in it for any purpose other than to notify us.

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Any views expressed in this message are those of the individual sender, except where the sender specifically states them to be the views of DART Helicopter Services.



61001 Hwy 11 west, P.O. Box 160  
Cochrane, ON P0L 1C0  
Phone: 1-705-272-5755 Fax: 1-705-272-5752  
guylain@expeditionhelicopters.com

| Packing Slip     |                           |
|------------------|---------------------------|
| Packing Slip No. | 1285                      |
| Date             | Dec 3, 2010               |
| Created By       | Suzanne                   |
| Type             | RMA#RA110139<br>"SQ10210" |
| Currency         | USD                       |
| Page 1 / 1       |                           |

## RMA#RA110139 "SQ10210" #1285

|  |   |
|--|---|
| <b>To</b><br>DART HELICOPTER SERVICES<br>1270 ABERDEEN STREET<br>HAWKESBURY, ONTARIO K6A 1K7<br>CANADA<br><br>Tel: 613-632-3336, Fax: 613-632-4443 OR 800-556-4166 | <b>Order from</b><br>190 HWY 11 WEST PO.BOX 160 COCHRANE, ONTARIO P0L1C0<br><br>Tel: (705)-272-5755, Fax: (705)-272-5752              |
| <b>Ship to</b><br>SAME<br>190 HWY 11 WEST, PO BOX 160<br>COCHRANE, ONTARIO<br>P0L 1C0<br><br>Tel: (705) 272-5755, Fax: (705) 272-5752                              | <b>Bill to</b><br>SAME<br>190 HWY 11 WEST, PO BOX 160<br>COCHRANE, ONTARIO<br>P0L 1C0<br><br>Tel: (705) 272-5755, Fax: (705) 272-5752 |

### **\*\* Work to be accomplished at this time \*\***

Please, perform RMA#RA110139 "SQ10210"

### **Parts description**

| Part Number   | Description  | Tracking # | Ser/Batch # | TTSN | TTSO | Reg    | Est. Cost |
|---------------|--|------------|-------------|------|------|--------|-----------|
| D212-664-101  | CROSSTUBE FWD  | 11898      | B60522      |      |      | C-FMQN | 0.00      |
| <b>Defect</b> | TO BE SENT TO DART HELICOPTERS FOR WARRANTY EVALUATION AS PER JEAN KERR<br><br>RETURN AUTHORIZATION #RA110139<br>"SQ10210" |            |             |      |      |        |           |

| Part Number   | Description  | Tracking # | Ser/Batch # | TTSN | TTSO | Reg    | Est. Cost |
|---------------|--|------------|-------------|------|------|--------|-----------|
| D212-664-201  | CROSSTUBE AFT  | 11899      | B60450      |      |      | C-FMQN | 0.00      |
| <b>Defect</b> | TO BE SENT TO DART HELICOPTERS FOR WARRANTY EVALUATION AS PER JEAN KERR<br><br>RETURN AUTHORIZATION #RA110139<br>"SQ10210" |            |             |      |      |        |           |

  
Signature

  
Date



4650 North Avenue, Oceanside, CA 92056  
Tel: 1-760-295-6094 Fax: 1-760-295-9117  
E-mail: sales@darths.com

## **RETURN AUTHORIZATION**

Date: Dec. 03/10  
To: Expedition Helicopters Inc.  
Attention: Guylain Tremblay  
E-Mail: guylain@expeditionhelicopters.com  
From: Jean

Dear Guylain

Please find below the instructions to return the **D212-664-101/201** ordered on your Purchase Order **2427**.

1. Your Return Authorization Number is **RA110139**. Please make reference to this number on all paperwork. Items must still be in original packaging. Please label the crosstubes with "**SQ10210**".
2. The Original Release Certificate, STC's, Installation Instructions, Maintenance Manual Supplement, Flight Manual Supplement, and packing slips must accompany the shipment.
3. Please mark the shipping labels to:  
Dart Aerospace,  
1270 Aberdeen Street,  
Hawkesbury, Ontario.  
Canada K6A 1K7  
Tel.: 1-613-632-5200
4. Brad from Journey Freight (tel 514-447-0242, ext. 3242) will contact you for the pick up of the crosstubes. This Return Authorization expires in 30 days. The Quality Control at Dart Aerospace will evaluate the crosstubes and will notify you once completed.

If you require additional information, please feel free to contact us. **DART HELICOPTER SERVICES, LLC** is always pleased to assist you with your helicopter needs.

Best Regards,

Jean Kerr  
Sales Support  
**DART HELICOPTER SERVICES, LLC**



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 5200  
Fax: 613 632 5246

## Packing Slip

Packing Slip Number : INV102995

Customer Purchase Order ID : 7601/2427

Sales Order ID : SO103029

Ship Date : 8/24/2010 12:58:00 PM

Page Number : 2

Bill To : CU-DAR001

DART HELICOPTERS SERVICES LLC.  
1736 ORD WAY  
OCEANSIDE, CA 92056  
US

Ship To :

EXPEDITION HELICOPTERS, INC.  
190 HWY 11 WEST  
COCHRANE, ON P0L 1C0  
CA

Contact Name: Suzanne Arsenault

Contact Phone: 705 272 5755

Contact Phone Ext.:

Buyer:

Order Date: 8/24/2010 12:46:25 PM  
Manitoulin Ground Coll

FOB: Origin  
Territory: CA Central

Ship From: MAIN WAREHOUSE

DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7 CANADA

Bill of Lading :

Pallets 0  
Cartons 0  
Weight 0

Ship From Phone: 613 632 5200

| <u>Line /</u>           | <u>Item ID /</u>    | <u>Item Name</u> | <u>Harmonize Code:</u> | <u>Req. Date</u> | <u>Req. Qty</u> | <u>Ship Qty</u> | <u>Backordered Qty</u> |
|-------------------------|---------------------|------------------|------------------------|------------------|-----------------|-----------------|------------------------|
| <u>Cust PO Line Nbr</u> | <u>Cust Item ID</u> |                  |                        |                  |                 |                 |                        |
| 4                       | D205-634-011        |                  | 8803.20                | 8/24/2010        | 1.0000          | 1.0000          | 0.0000                 |
| 4                       | Skidtube            |                  |                        |                  | Each            | Each            |                        |

Special  
Instructions:

Lot Number

60690

Lot Trans Qty

1.0000

As per FAA STC requirement, this is written evidence that Dart Aerospace Ltd. gives the above Ship-to permission to use the STC(s) for the above shipped part(s) to alter the product listed in the STC(s).

Special  
Instructions for  
Sales Order:



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 5200  
Fax: 613 632 5246

# Packing Slip

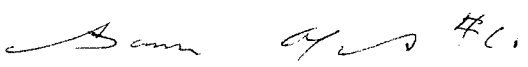
Packing Slip Number : INV102995  
Customer Purchase Order ID : 7601/2427  
Sales Order ID : SO103029  
Ship Date : 8/24/2010 12:58:00 PM  
Page Number : 1


|   |   |  |  |
|---|---|--|--|
| <b>Bill To :</b> CU-DAR001<br>DART HELICOPTERS SERVICES LLC.<br>1736 ORD WAY<br>OCEANSIDE, CA 92056<br>US |   | <b>Ship To :</b><br>EXPEDITION HELICOPTERS, INC.<br>190 HWY 11 WEST<br>COCHRANE, ON P0L 1C0<br>CA          |  |
| <b>Buyer:</b>   |   | <b>Contact Name:</b> Suzanne Arsenault<br><b>Contact Phone:</b> 705 272 5755<br><b>Contact Phone Ext.:</b> |  |
| <b>Order Date:</b> 8/24/2010 12:46:25 PM<br><b>Bill of Lading :</b>                                       | <b>FOB:</b> Origin<br><b>Territory:</b> CA Central      | <b>Ship From:</b> MAIN WAREHOUSE<br>DART AEROSPACE LTD<br>1270 ABERDEEN<br>HAWKESBURY, ON K6A 1K7 CANADA   |  |
|   | <b>Pallets</b> 0<br><b>Cartons</b> 0<br><b>Weight</b> 0 | <b>Ship From Phone:</b> 613 632 5200   |  |

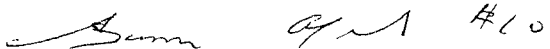
| <u>Line /</u>                | <u>Item ID /</u>    | <u>Item Name</u>  | <u>Harmonize Code:</u> | <u>Req. Date</u> | <u>Req. Qty</u> | <u>Ship Qty</u>      | <u>Backordered Qty</u> |
|------------------------------|---------------------|-------------------|------------------------|------------------|-----------------|----------------------|------------------------|
| <u>Cust PO Line Nbr</u>      | <u>Cust Item ID</u> |                   |                        |                  |                 |                      |                        |
| 1                            | D212-664-101        |                   | 8803.20                | 8/24/2010        | 1.0000          | 1.0000               | 0.0000                 |
| 1                            | Crosstube Fwd       |                   |                        |                  | Each            | Each                 |                        |
| <b>Special Instructions:</b> |                     | <u>Lot Number</u> |                        |                  |                 | <u>Lot Trans Qty</u> |                        |
|                              |                     | 60522             |                        |                  |                 | 1.0000               |                        |
| 2                            | D212-664-201        |                   | 8803.20                | 8/24/2010        | 1.0000          | 1.0000               | 0.0000                 |
| 2                            | Crosstube Aft       |                   |                        |                  | Each            | Each                 |                        |
| <b>Special Instructions:</b> |                     | <u>Lot Number</u> |                        |                  |                 | <u>Lot Trans Qty</u> |                        |
|                              |                     | 60450             |                        |                  |                 | 1.0000               |                        |
| 3                            | D205-634-011        |                   | 8803.20                | 8/24/2010        | 1.0000          | 1.0000               | 0.0000                 |
| 3                            | Skidtube            |                   |                        |                  | Each            | Each                 |                        |
| <b>Special Instructions:</b> |                     | <u>Lot Number</u> |                        |                  |                 | <u>Lot Trans Qty</u> |                        |
|                              |                     | 59280             |                        |                  |                 | 1.0000               |                        |


As per FAA STC requirement, this is written evidence that Dart Aerospace Ltd. gives the above Ship-to permission to use the STC(s) for the above shipped part(s) to alter the product listed in the STC(s).

Special  
Instructions for  
Sales Order:

|  |                        |  |  |                               |                         |  |  |
|--|------------------------|--|--|-------------------------------|-------------------------|--|--|
| <b>1. Approving Civil Aviation Authority/Country:</b><br><b>Transport Canada</b>   |                        | <b>2. AUTHORIZED RELEASE CERTIFICATE</b><br><b>FORM ONE</b>                  |  |                               |                         | <b>3. Form Tracking No:</b><br>SO103029-2          |  |
| <b>4. Organizations Name and Address:</b>  |                        | DART AEROSPACE LTD<br>1270 Aberdeen Street<br>Hawkesbury, ON, K6A 1K7 Canada |  |                               |                         | <b>5. Work Order/Contract/Invoice</b><br>7601/2427 |  |
| <b>6. Item:</b>  | <b>7. Description:</b> | <b>8. Part No:</b>   | <b>9. Quantity:</b>  | <b>10. Serial/Batch No:</b>   | <b>11. Status/Work:</b> |  |  |
| 1  | Crosstube Aft          | D212-664-201   | 1  | B60450                        | New                     |  |  |
| <b>12. Remarks:</b><br>TC STC SH01-9 Issue 3, FAA STC SR01298NY 09/01/08, EASA STC EASA.IM.R.S.01304 07/03/06  |                        |  |  |                               |                         |  |  |
| <b>13a. Certifies that the items identified above were manufactured in conformity to:</b><br><input checked="" type="checkbox"/> Approved design data and are in a condition for safe operation.<br><input type="checkbox"/> Non-approved design data specified in Block 12. |                        |  | <b>14a.</b> <input type="checkbox"/> CAR 571.10 Maintenance Release<br><input type="checkbox"/> Other regulations specified in Block 12<br>Certifies that unless otherwise specified in Block 12, the work identified in Block 11 and described in Block 12 has been performed in compliance with the Canadian Aviation Regulations. |                               |                         |  |  |
| <b>13b. Signature:</b><br>   |                        | <b>13c. Approved Organization Number:</b><br>9-89                            |  | <b>14b. Signature:</b><br>N/A |                         | <b>14c. Approved Organization Number:</b><br>N/A   |  |
| <b>13d. Name:</b><br>Suzanne Bedford   |                        | <b>13e. Date (dd/mm/yyyy):</b><br>24/Aug/2010                                |  | <b>14d. Name:</b><br>N/A      |                         | <b>14e. Date (dd/mm/yyyy):</b><br>N/A              |  |
| (Previously form 24-0078)  |                        |  |  |                               |                         |  |  |
| Important: See notes   |                        |  |  |                               |                         |  |  |
| <b>This certificate does not constitute authority to install.</b>  |                        |  |  |                               |                         |  |  |
| <b>Installer Responsibilities</b>  |                        |  |  |                               |                         |  |  |
| Installers working in accordance with the national regulations of a country other than that specified in block 1 must ensure that their regulations recognize certifications from the country specified.   |                        |  |  |                               |                         |  |  |
| Statements in blocks 13a or 14a do not constitute installation certification. In all cases, the technical record for the aircraft must contain an installation certification issued in accordance with the applicable national regulations before the aircraft may be flown. |                        |  |  |                               |                         |  |  |

|  |                 |  |   |                      |  |  |
|--|-----------------|--|---|----------------------|--|--|
| 1. Approving Civil Aviation Authority/Country:<br><b>Transport Canada</b>  |                 | 2. <b>AUTHORIZED RELEASE CERTIFICATE</b><br><b>FORM ONE</b>                  |   |                      | 3. Form Tracking No:<br>SO103029-1                             |  |
| 4. Organizations Name and Address:   |                 | DART AEROSPACE LTD<br>1270 Aberdeen Street<br>Hawkesbury, ON, K6A 1K7 Canada |   |                      | Tel: 1 613 632 5200<br>Fax: 1 613 632 5246<br>www.dartaero.com |  |
|  |                 | 5. Work Order/Contract/Invoice<br>7601/2427                                  |   |                      |  |  |
| 6. Item:   | 7. Description: | 8. Part No:  | 9. Quantity:  | 10. Serial/Batch No: | 11. Status/Work:   |  |
| 1  | Crosstube Fwd   | D212-664-101   | 1   | B60522               | New  |  |
| 12. Remarks:<br>TC STC SH01-9 Issue 3, FAA STC SR01298NY 09/01/08, EASA STC EASA.IM.R.S.01304 07/03/06   |                 |  |   |                      |  |  |
| 13a. Certifies that the items identified above were manufactured in conformity to:   |                 |  | 14a. <input type="checkbox"/> CAR 571.10 Maintenance Release<br><input type="checkbox"/> Other regulations specified in Block 12<br>Certifies that unless otherwise specified in Block 12, the work identified in Block 11 and described in Block 12 has been performed in compliance with the Canadian Aviation Regulations. |                      |  |  |
| <input checked="" type="checkbox"/> Approved design data and are in a condition for safe operation.<br><input type="checkbox"/> Non-approved design data specified in Block 12.  |                 |  |   |                      |  |  |
| 13b. Signature:  |                 | 13c. Approved Organization Number:   | 14b. Signature:   |                      | 14c. Approved Organization Number:                             |  |
|   |                 | 9-89   | N/A   |                      | N/A  |  |
| 13d. Name:   |                 | 13e. Date (dd/mm/yyyy):  | 14d. Name:  |                      | 14e. Date (dd/mm/yyyy):  |  |
| Suzanne Bedford  |                 | 24/Aug/2010  | N/A   |                      | N/A  |  |
| (Previously form 24-0078)  |                 |  |   |                      |  |  |
| <p style="text-align: right;">Important: See notes</p> <p><b>This certificate does not constitute authority to install.</b></p> <p style="text-align: center;"><b>Installer Responsibilities</b></p> <p>Installers working in accordance with the national regulations of a country other than that specified in block 1 must ensure that their regulations recognize certifications from the country specified.</p> <p>Statements in blocks 13a or 14a do not constitute installation certification. In all cases, the technical record for the aircraft must contain an installation certification issued in accordance with the applicable national regulations before the aircraft may be flown.</p> |                 |  |   |                      |  |  |

|  |                 |   |   |  |   |  |
|--|-----------------|---|---|--|---|--|
| 1. Approving Civil Aviation Authority/Country:<br><b>Transport Canada</b>  |                 | 2. <b>AUTHORIZED RELEASE CERTIFICATE</b><br><b>FORM ONE</b> |   |  | 3. Form Tracking No:<br>SO103029-4        |  |
| 4. Organizations Name and Address:<br>DART AEROSPACE LTD<br>1270 Aberdeen Street<br>Hawkesbury, ON, K6A 1K7 Canada   |                 |   |   | Tel: 1 613 632 5200<br>Fax: 1 613 632 5246<br>www.dartaero.com |   |  |
| 5. Work Order/Contract/Invoice<br>7601/2427  |                 |   |   |  |   |  |
| 6. Item:   | 7. Description: | 8. Part No:   | 9. Quantity:  | 10. Serial/Batch No:   | 11. Status/Work:                          |  |
| 1  | Skidtube        | D205-634-011  | 1   | B60690   | New                                       |  |
| 12. Remarks:<br>TC STC SH96-88 Issue 3, FAA STC SR00563NY 08/08/11, EASA STC EASA.IM.R.S.01303 07/06/27, JCAB JAPAN STC-55-1-TYO 99/11/24  |                 |   |   |  |   |  |
| 13a. Certifies that the items identified above were manufactured in conformity to:<br><input checked="" type="checkbox"/> Approved design data and are in a condition for safe operation.<br><input type="checkbox"/> Non-approved design data specified in Block 12.  |                 |   | 14a. <input type="checkbox"/> CAR 571.10 Maintenance Release<br><input type="checkbox"/> Other regulations specified in Block 12<br>Certifies that unless otherwise specified in Block 12, the work identified in Block 11 and described in Block 12 has been performed in compliance with the Canadian Aviation Regulations. |  |   |  |
| 13b. Signature:<br>  |                 | 13c. Approved Organization Number:<br>9-89                  | 14b. Signature:<br>N/A  |  | 14c. Approved Organization Number:<br>N/A |  |
| 13d. Name:<br>Suzanne Bedford  |                 | 13e. Date (dd/mm/yyyy):<br>24/Aug/2010                      | 14d. Name:<br>N/A   |  | 14e. Date (dd/mm/yyyy):<br>N/A            |  |
| (Previously form 24-0078) <span style="float: right;">Important: See notes</span>  |                 |   |   |  |   |  |
| <p>This certificate does not constitute authority to install.</p> <p style="text-align: center;"><b>Installer Responsibilities</b></p> <p>Installers working in accordance with the national regulations of a country other than that specified in block 1 must ensure that their regulations recognize certifications from the country specified.</p> <p>Statements in blocks 13a or 14a do not constitute installation certification. In all cases, the technical record for the aircraft must contain an installation certification issued in accordance with the applicable national regulations before the aircraft may be flown.</p> |                 |   |   |  |   |  |

|   |                        |  |  |                               |  |  |
|---|------------------------|--|--|-------------------------------|--|--|
| <b>1. Approving Civil Aviation Authority/Country:</b><br><b>Transport Canada</b>  |                        | <b>2. AUTHORIZED RELEASE CERTIFICATE</b><br><b>FORM ONE</b>    |  |                               | <b>3. Form Tracking No:</b><br>SO103029-3          |  |
| <b>4. Organizations Name and Address:</b><br>DART AEROSPACE LTD<br>1270 Aberdeen Street<br>Hawkesbury, ON, K6A 1K7 Canada   |                        | Tel: 1 613 632 5200<br>Fax: 1 613 632 5246<br>www.dartacro.com |  |                               | <b>5. Work Order/Contract/Invoice</b><br>7601/2427 |  |
| <b>6. Item:</b>   | <b>7. Description:</b> | <b>8. Part No:</b>   | <b>9. Quantity:</b>  | <b>10. Serial/Batch No:</b>   | <b>11. Status/Work:</b>                            |  |
| 1   | Skidtube               | D205-634-011   | 1  | B59280                        | New  |  |
| <b>12. Remarks:</b><br>TC STC SH96-88 Issue 3, FAA STC SR00563NY 08/08/11, EASA STC EASA.IM.R.S.01303 07/06/27, JCAB JAPAN STC-55-1-TYO 99/11/24  |                        |  |  |                               |  |  |
| <b>13a. Certifies that the items identified above were manufactured in conformity to:</b><br><input checked="" type="checkbox"/> Approved design data and are in a condition for safe operation.<br><input type="checkbox"/> Non-approved design data specified in Block 12.  |                        |  | <b>14a.</b> <input type="checkbox"/> CAR 571.10 Maintenance Release<br><input type="checkbox"/> Other regulations specified in Block 12<br>Certifies that unless otherwise specified in Block 12, the work identified in Block 11 and described in Block 12 has been performed in compliance with the Canadian Aviation Regulations. |                               |  |  |
| <b>13b. Signature:</b><br>   |                        | <b>13c. Approved Organization Number:</b><br>9-89              |  | <b>14b. Signature:</b><br>N/A |  | <b>14c. Approved Organization Number:</b><br>N/A |
| <b>13d. Name:</b><br>Suzanne Bedford  |                        | <b>13e. Date (dd/mm/yyyy):</b><br>24/Aug/2010                  |  | <b>14d. Name:</b><br>N/A      |  | <b>14e. Date (dd/mm/yyyy):</b><br>N/A            |
| (Previously form 24-0078)   |                        |  |  |                               |  |  |
| <div style="text-align: right;">Important: See notes</div> <div style="text-align: center;"> <b>Installer Responsibilities</b> </div> <p>This certificate does not constitute authority to install.</p> <p>Installers working in accordance with the national regulations of a country other than that specified in block 1 must ensure that their regulations recognize certifications from the country specified.</p> <p>Statements in blocks 13a or 14a do not constitute installation certification. In all cases, the technical record for the aircraft must contain an installation certification issued in accordance with the applicable national regulations before the aircraft may be flown.</p> |                        |  |  |                               |  |  |



File D

**L Lacelle**

**From:** David Shepherd [dshepherd@dartaero.com]  
**Sent:** January 5, 2011 5:21 PM  
**To:** 'Jason Murdoch'; 'L Lacelle'; 'Marc Bellavance'  
**Cc:** 'Stow, Dan'; 'Susanne Sheldon'; 'Mike Petsche'; swillems@dartaero.com; 'Bill Beckett'  
**Subject:** RE: Crosstube corrosion from Expedition

Jason,

I would recommend that we NDT them.

David

**From:** Jason Murdoch [mailto:jmurdoch@dartaero.com]  
**Sent:** Wednesday, January 05, 2011 1:59 PM  
**To:** 'L Lacelle'; 'Marc Bellavance'  
**Cc:** 'Stow, Dan'; 'Susanne Sheldon'; 'Mike Petsche'; 'David Shepherd'; swillems@dartaero.com; 'Bill Beckett'  
**Subject:** RE: Crosstube corrosion from Expedition

Will these tubes be NDT'd before they ship back to the customer? I do not want DART being held responsible for any issues that might occur down the road.....ya mean?

**Jason Murdoch**  
**Quality Coordinator**  
 jmurdoch@dartaero.com  
 DART Aerospace Ltd.  
 613-632-5200

*How to ship  
New B/W?*

**From:** L Lacelle [mailto:llacelle@dartaero.com]  
**Sent:** Wednesday, January 05, 2011 1:55 PM  
**To:** 'Marc Bellavance'  
**Cc:** 'Jason Murdoch'; 'Stow, Dan'; 'Susanne Sheldon'; 'Mike Petsche'; 'David Shepherd'; swillems@dartaero.com; 'Bill Beckett'  
**Subject:** RE: Crosstube corrosion from Expedition

With everyone gone for the last couple of weeks no one really touched them. They will get ground today, and alodined and we should be able to ship out by Friday.

LL

**From:** Marc Bellavance [mailto:mbellavance@dartaero.com]  
**Sent:** January 5, 2011 1:49 PM  
**To:** 'L Lacelle'  
**Cc:** 'Jason Murdoch'; 'Stow, Dan'; 'Susanne Sheldon'; 'Mike Petsche'; 'David Shepherd'; swillems@dartaero.com; 'Bill Beckett'  
**Subject:** RE: Crosstube corrosion from Expedition  
**Importance:** High

Linda,

1/06/11

Where are we with this? Customer wants to know.

Marc Bellavance  
Technical/Shop Support

**DART aerospace Ltd.**

Tel: 613-632-5200 Ext. 243

Cel: 613-676-0992

Fax: 613-632-9311

E-mail: [mbellavance@dartaero.com](mailto:mbellavance@dartaero.com)

Web: [www.dartaero.com](http://www.dartaero.com)

**Product Documentation: Verify Revision Status/Download [HERE!](#)**



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**From:** Bill Beckett [mailto:bbeckett@dartaero.com]

**Sent:** December 20, 2010 12:55 PM

**To:** 'Peggy McDonald'; swillems@dartaero.com; 'L Lacelle'

**Cc:** 'Marc Bellavance'; Jason Murdoch; 'Stow, Dan'; Susanne Sheldon; 'Mike Petsche'; 'David Shepherd'

**Subject:** RE: Crosstube corrosion from Expedition

Peggy – ok, this is fine.

Sian – no-charge on a CSR. Please indicate ship date (talk to LL).

Linda – pls prepare work order **NB – no priming!** Ensure interior is protected during etch and alodine.

Bill

**From:** Peggy McDonald [mailto:peggy@darths.com]

**Sent:** December 20, 2010 12:48 PM

**To:** Bill Beckett

**Cc:** Marc Bellavance

**Subject:** Crosstube corrosion from Expedition

**Importance:** High

Hi Bill,

I spoke with Expedition this morning about the crosstube corrosion issue.

To resolve the issue, I took your recommendation and offered the crosstube rework at no charge.  
(removal of the surface corrosion, acid etch and alodine)

**PLEASE NOTE : the customer will do their own priming right before paint.**

These can be returned to them early in the new year.

I recommend a MISC no charge PO to be sent to DAS.

Freight will be on the DHS account.

Please advise how you would like DHS to proceed.

1/06/11

Peggy

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**PLEASE NOTE OUR NEW CORPORATE OFFICE ADDRESS: 4650 North Avenue, Oceanside, California 92056**

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1/06/11

# List Lots

January 5, 2011 3:20:21 PM

Page 1 of 1

Criteria : All Items All Locations All Warehouses All Quantity

| Item ID   | Warehouse ID | Lot Number | Last Trans Date | Lot Qty | Shelf Life Dt | Type Code | Comments |
|-----------|--------------|------------|-----------------|---------|---------------|-----------|----------|
| Item Name | Location ID  |            |                 |         |               | Lot Code  |          |

|                           |                |       |          |        |  |  |  |
|---------------------------|----------------|-------|----------|--------|--|--|--|
| D212-664-201CM            | Main Warehouse | 60450 | 12/14/10 | 1.0000 |  |  |  |
| Crosstube, customer mat'l | RMAInspect     |       |          |        |  |  |  |

Total: 1.0000

64547

RA 110739

# List Lots

January 5, 2011 3:20:06 PM

Page 1 of 1

Criteria : All Items All Locations All Warehouses All Quantity

| Item ID   | Warehouse ID | Lot Number | Last Trans Date | Lot Qty | Shelf Life Dt | Type Code | Comments |
|-----------|--------------|------------|-----------------|---------|---------------|-----------|----------|
| Item Name | Location ID  |            |                 |         | Lot Code      |           |          |

|                |                |       |          |        |  |  |  |
|----------------|----------------|-------|----------|--------|--|--|--|
| D212-664-101CM | Main Warehouse | 60522 | 12/14/10 | 1.0000 |  |  |  |
|----------------|----------------|-------|----------|--------|--|--|--|

|                           |            |  |  |  |  |  |  |
|---------------------------|------------|--|--|--|--|--|--|
| Crosstube, customer mat'l | RMAInspect |  |  |  |  |  |  |
|---------------------------|------------|--|--|--|--|--|--|

Total: 1.0000

64541

\* Customer Property \*

Do Not Damage

24110137 For investigation  
& evaluation

NE216-380

- 5010210

10/12/07

\* Customer Property \*

Do Not Damage

24110139 For investigation

& evaluation

- NE216-380

- 5010210

10/12/07

ASAP

**Work Order ID 64547**



December 21, 2010 2:30:32 PM

Item ID: D212-664-201

Accept



Setup Start



Revision ID:

Stop



Item Name: Crosstube Aft

Start Date: 12/08/10 Start Qty: 1.00



Cust Item ID:

Required Date: 12/09/10 Req'd Qty: 1.00



Customer: CU-DAR001

Reference: RMA RA110139 + Rework

Run Start



Approvals: Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D212-664-241

Rev D

100

0.00



QC

0.00

Quality Control

Memo

INSPECT RA110139  
D212-664-201 B60450

See RMA EUCR report.

11-01-06